

Digital Transformation and ESG in Enhancing Firm Performance: Empirical Evidence from the Indonesian Capital Market

Hasma^{a,*}, Nengsi Sudirman^b, Herlina Ilyas^c, Lestiana Jelita^d

^a [Faculty of Economics], [Patria Artha University], [Makassar], [Indonesia]

^b [Faculty of Business], [Mega Buana University], [Palopo], [Indonesia]

^c [Faculty of Economics], [University of West Sulawesi], [Majene], [Indonesia]

^d [Faculty of Economics], [Patria Artha University], [Makassar], [Indonesia]

*Corresponding author. E-mail address: hasma.akuntan@gmail.com; nengsisudirmann@gmail.com; herlinailyas@unsulbar.ac.id; lestijelita22@gmail.com

ARTICLE INFO

Article History:
Received
May 2025

Accepted
July 2025

Keywords
*Digital
Transformation,
Environmental, Social,
and Governance (ESG),
Firm Performance*

A B S T R A C T

This study aims to examine the effect of digital transformation and Environmental, Social, and Governance (ESG) disclosure on the financial performance of companies listed on the Indonesia Stock Exchange, with firm size as a control variable. The increasing relevance of sustainability and digitalization strategies in enhancing corporate competitiveness in the digital economy era drives this research. While numerous studies have explored digital transformation and ESG independently, limited research has integrated both aspects within the context of emerging markets, particularly Indonesia. A quantitative research design was employed using secondary data obtained from annual reports, sustainability reports, and financial statements. Utilizing firm size as a control variable, this study attempts to investigate how the financial performance of companies listed on the Indonesia Stock Exchange is affected by digital transformation and Environmental, Social, and Governance (ESG) disclosure. In the age of the digital economy, the growing importance of digitalization and sustainability tactics in raising corporate competitiveness is what motivates this study. Few studies have combined digital transformation and ESG in the context of emerging markets, especially Indonesia, despite the fact that both topics have been the subject of numerous studies conducted separately. Secondary data from financial statements, sustainability reports, and annual reports was used in a quantitative study design. The results show that ESG disclosure and digital transformation both significantly and favorably affect business performance. On the other hand, ROA is not significantly impacted by firm size, indicating that strategic digital and sustainability initiatives have a greater impact on profitability gains than does company size. These findings demonstrate how strategically crucial it is to combine digital and ESG elements in order to increase firm value. By providing empirical data from the Indonesian capital market, where the relationship between sustainability and digital innovation is still poorly understood, the study adds to the body of existing literature. The necessity for businesses to give clear ESG reporting and digital investments top priority as long-term value generators are examples of practical ramifications. Furthermore, through market incentives and supportive policies, regulators are urged to promote ESG and digital adoption.

1. Introduction

1.1 Background

Technological advancements and global awareness of emerging issues have forced companies to adapt strategically. The global business world faces two key transformative demands: digitalization and sustainability. Both are no longer optional but have become strategic imperatives for companies to maintain competitiveness while improving financial performance. Digital transformation and the implementation of Environmental, Social, and Governance (ESG) are now two key pillars in maintaining corporate aspirations and competitiveness. These two initiatives are believed to impact not only a company's reputation but also its financial performance directly [1], [2].

Accordingly, environmental, social, and governance (ESG) concerns have emerged as crucial determinants in evaluating the sustainability and reputation of businesses. ESG practices are becoming more and more important to both individual and institutional investors when making investment decisions [2], [3]. Issuers in the capital market are being encouraged to incorporate ESG principles into their business strategies by rising stakeholder expectations regarding corporate social responsibility [4]. ESG reflects not only social responsibility but also a company's ability to manage non-financial risks that impact profitability [4], [5]. A study by [6] found that companies with high ESG scores tend to have better profitability and company value.

Digital transformation encourages companies to integrate technology into all business processes, from operations and marketing to customer service. In the context of companies listed on the capital market, digitalization is also used to improve cost efficiency and decision-making accuracy [7]. A study by [8] shows that companies that intensively implement digital transformation experience significant improvements in financial performance, especially in Return on Assets (ROA) and operational efficiency. Digital transformation, which includes the use of technologies such as cloud computing, artificial intelligence, big data, and digital platforms, has been shown to drive operational efficiency and value creation [8], [9]. Digital transformation encourages companies to integrate technology into all business processes, from operations and marketing to customer service. In the context of companies listed on the capital market, digitalization is also used to improve cost efficiency and decision-making accuracy [7]. A study by [8] showed that companies that intensively implemented digital transformation experienced significant improvements in financial performance, particularly in Return on Assets (ROA) and operational efficiency. Digital transformation, which includes the use of technologies such as cloud computing, artificial intelligence, big data, and digital platforms, has been shown to drive operational efficiency and value creation [8], [9].

Since 2020, the Indonesian capital market has seen a rise in digitalization and ESG trends, especially since the introduction of the IDX ESG Leaders index and the accelerated adoption of technology brought on by the pandemic. Issuers that are part of this index are thought to be dedicated to increased information transparency, sustainability, and good governance [10]. However, despite the strengthening of digital transformation and ESG trends, empirical research examining both simultaneously on the financial performance of companies in the Indonesian capital market remains limited. Yet, the combination of these two strategies has the potential to create a sustainable competitive advantage [11]. Furthermore, firm size needs to be controlled for in research, as larger companies generally have a greater capacity to adopt technology and implement sustainability principles [11].

Several previous studies have shown that digitalization positively contributes to financial performance through cost efficiency and product innovation [1], [7]. Furthermore, the implementation of ESG principles is also associated with reduced business risk, increased investor loyalty, and long-term firm value [12], [13]. However, these results tend to vary depending on the industry sector, company size, and geographic context.

Based on this background, this study aims to examine the impact of digital transformation and ESG on corporate financial performance, focusing on issuers listed on the Indonesia Stock Exchange. This study also uses company size as a control variable, as companies with larger asset scales tend to have more adequate resources to effectively implement digital technology and ESG strategies [11], [14]. The sample was also selected from issuers listed on the Indonesia Stock Exchange. The findings of this study are expected to enrich the literature and provide practical contributions to corporate management, investors, and regulators in developing adaptive and sustainable business strategies.

1.2 Problem Statement

Companies are undergoing strategic transformations as a result of shifts in the global business environment brought about by technology breakthroughs and increased awareness of sustainability issues. In this regard, two essential components of developing a flexible and sustainable business strategy are digital transformation and Environmental, Social, and Governance (ESG) practices. ESG is a measure of a company's dedication to the environment, social responsibility, and good governance, while digital transformation contributes to increased productivity, service quality, and data-driven decision-making. The following formulation of the research problem is based on this description:

- Does the financial performance of businesses listed on the Indonesia Stock Exchange change as a result of digital transformation?
- Is the financial performance of a company impacted by Environmental, Social, and Governance (ESG) practices?
- Do ESG and digital transformation have an impact on a company's financial performance at the same time?
- As a control variable, does the size of the company affect the relationship between ESG, digital transformation, and financial performance?

1.3 Objectives and Scope

The purpose of this study is to examine and elucidate how the financial performance of companies listed on the Indonesia Stock Exchange is impacted by Environmental, Social, and Governance (ESG) practices, digital transformation, and company size.

A quantitative methodology and secondary data from the annual reports and sustainability reports of businesses listed on the Indonesia Stock Exchange (IDX) for the years 2020–2024 were used in this study. Since sectoral influences are not thoroughly examined in this study, generalizations are restricted to the total number of businesses that fit the sample requirements. It is hoped that despite this restriction, the study will stay concentrated on analyzing the connections between important variables and produce findings that are pertinent to the Indonesian capital market.

2. Literature Review

2.1 Related Work

Extensive research has been conducted on digital transformation and ESG as determinants of financial performance, particularly over the past decade. These studies provide empirical evidence on how resource-based strategies and legitimacy can drive corporate performance, in line with the Resource-Based View (RBV) framework and Legitimacy Theory.

2.1.1 Digital Transformation and Financial Performance

The strategic process that businesses use to incorporate digital technology into every facet of their operations and business models is known as "digital transformation." [1]. Information systems, e-commerce, big data, automation, and artificial intelligence-based innovations are all used in this process to increase productivity, efficiency, and competitiveness [15], [16].

In the context of capital markets, companies that successfully implement digital transformation demonstrate improved financial performance, both in terms of profitability and company value. [7] found that digitalization positively impacts Return on Assets (ROA) and Return on Equity (ROE), particularly in large-scale companies able to invest in digital infrastructure. A study by [17] in Indonesia also showed that companies that implement comprehensive digital strategies are more adaptive to disruption and have superior operational performance compared to their competitors.

Research by [1] found that strategically implemented digital transformation can improve business process efficiency and create added value, particularly in the manufacturing sector. [16] additionally demonstrated how digital capability enhances financial performance by gaining a competitive edge. These results are consistent with the Resource-Based View (RBV), which holds that digitalization is an intangible asset that can help a business gain a competitive edge and is a highly valuable strategic resource that is hard to replicate.

2.1.2 Environmental, Social, and Governance (ESG) and Financial Performance

A company's corporate governance (G), social responsibility (S), and environmental responsibility (E) are assessed using the non-monetary ESG method. ESG is often associated with long-term success and is an essential metric for assessing business sustainability [2], [4]. ESG reflects a company's commitment to sustainability. Businesses use ESG within the framework of legitimacy theory in order to satisfy stakeholders and meet social expectations [4]. Research by [2], [6] demonstrates how businesses with strong ESG performance typically have better financial results because investors and the general public have greater faith in them.

The research findings of [4] also demonstrate that companies with high ESG scores tend to have more stable stock returns and lower financial risk. Furthermore, [2] demonstrate that integrating ESG into business strategy can lower capital costs and increase profitability. In emerging markets like Indonesia, [18] claim that one unique element influencing how investors view a company's long-term performance is the ESG index from the Indonesia Stock Exchange. The Legitimacy Theory, which holds that businesses acquire social legitimacy by adopting socially acceptable practices, is supported by this study.

2.1.3 Firm Size as a Control

Company size is a crucial factor influencing an organization's capacity to implement digital and sustainability strategies. Larger companies typically have stronger resources, more established

systems, and greater adaptability to technological and ESG demands [11], [14]. As a control variable, company size needs to be considered to avoid bias in the influence of digital transformation and ESG on financial performance due to differences in asset scale between companies [8]. [11], [14] Describe how bigger businesses can access more resources and technology to help them implement ESG and digital transformation. Consequently, a frequently used metric in financial analysis, the natural logarithm of total assets (LnAsset), is used to calculate the size of a company.

2.1.4 Similarities and Differences with Previous Research

This study and earlier research are similar in that they emphasize how digital transformation affects financial performance [1], [7]. This is in line with previous studies examining the impact of ESG on profitability and firm value [4], [6]. It employs a quantitative methodology derived from secondary data found in sustainability and annual reports. Additionally, it measures the performance of the company using financial metrics like ROA or PBV.

The difference between this study and previous studies is that there are not many studies that combine digital transformation and ESG simultaneously as two strategic variables in influencing financial performance, especially in the Indonesian context. This study considers company size as a control variable, which is rarely analyzed explicitly in previous studies, using an ordinal scoring approach of 1–3 to measure digital transformation based on content analysis, not just a dummy. And it focuses on companies listed on the IDX for the period 2020–2024, covering the period before and after the pandemic, which brings stronger digitalization and ESG dynamics.

2.2 Research Gap

Environmental, social, and governance (ESG) practices and digital transformation have a positive effect on corporate financial performance, according to a number of consistent findings from prior research and literature reviews [1], [6], [19]. However, most previous research has had a limited focus and has not examined the relationship between the two simultaneously, particularly in the context of a developing country like Indonesia.

Previous research generally analyzed digital transformation and ESG separately on company performance. Few studies have examined the combination of the two as complementary modern corporate strategies and their impact on financial performance. Yet, companies today tend to integrate both into their sustainability and digital efficiency strategies [16].

Most of the available literature comes from developed countries with more mature digital infrastructure and ESG regulations. Research in Indonesia is relatively limited, particularly within the current timeframe (2020–2024), reflecting the post-pandemic digitalization era and the launch of the ESG index by the Indonesia Stock Exchange.

Some previous studies did not control for company size, even though size can influence a company's ability to implement digitalization and ESG strategies [14]. Large companies have more adequate resources and access to technology than small and medium-sized companies.

Previous studies have often used a dummy measure of digitalization (1 = digitalization, 0 = no), which does not adequately capture the variation in digital adoption levels across companies. This study offers a methodological contribution by measuring digital transformation using an ordinal scale of 1–3, based on content analysis of annual reports.

3. Methodology

This study uses a quantitative explanatory approach to examine the causal relationship between digital transformation, ESG, and corporate financial performance. This approach was chosen because it is suitable for testing hypotheses based on numerical data obtained from corporate financial and sustainability reports. This research design also considers controlling for confounding variables, namely firm size, to provide a more accurate analysis of the relationships between the main variables.

3.1 Data Collection

The study's secondary data came from the 2020–2024 Annual Reports and Sustainability Reports of businesses listed on the Indonesia Stock Exchange (IDX). Each company's official website and the official IDX website (www.idx.co.id) were used to gather data.

The sampling method used was purposive sampling, with the following criteria:

- Companies listed on the IDX consecutively during the 2020–2024 period.
- Published a complete annual report and/or sustainability report during the observation period.
- Provided relevant information related to digitalization and ESG indicators.
- Excluded the financial and banking sectors (due to their different regulatory reporting characteristics).

The targeted sample size is 16 companies $\times$ 5 years (2020–2024) so that the total observation is 80 data units.

Digital transformation is measured using an ordinal scale of 1–3, based on a content analysis of companies' annual reports. ESG is measured using a score of 0–3 based on the completeness of disclosure of E, S, and G aspects. Financial performance is measured using return on assets (ROA), and company size is measured using the natural logarithm of total assets (LnAsset).

3.2 Analysis Techniques

Multiple linear regression was used to analyze the data using SPSS software. This approach was selected because it met the goal of the study, which was to determine whether two or more independent variables could simultaneously affect the dependent variable.

The regression model used is as follows:

$$ROA = \beta_0 + \beta_1 TD + \beta_2 ESG + \beta_3 * SIZE + \varepsilon$$

Where:

ROA = Return on Assets (financial performance)

DT = Digital Transformation (score 1–3)

ESG = ESG Disclosure (dummy: 0 or 1)

SIZE = Company size (LnAsset)

ε = error term

The traditional assumption tests (autocorrelation, heteroscedasticity, multicollinearity, and normality), coefficient of determination (R²), partial significance tests (t-test), and simultaneous tests (F-test) are all part of the analysis steps.

3.3 Validation

To ensure the validity and reliability of research results, the following steps were taken: Financial and non-financial data were obtained from official sources (the IDX and company websites), ensuring the validity of secondary data sources. Digital transformation was measured using a content analysis method based on objective and consistent criteria to reduce subjectivity in the assessment.

- To make sure the distribution of the regression data is not skewed, a normality test is run.
- The absence of a strong correlation between the independent variables is guaranteed by a multicollinearity test.
- To make sure the residual data are homoscedastic, a heteroscedasticity test is conducted.
- To find serial correlation between the residuals, an autocorrelation test is run.

4. Results and Discussion

Descriptive Statistical Test

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Digital Transformation	80	1.00	3.00	1.9375	.86190
ESG	80	.00	3.00	1.5625	1.12333
Size	80	27.71	31.14	29.4856	.64723
Financial Performance	80	.05	.12	.0709	.01371
Valid N (listwise)	80				

Source: Data Processed by SPSS, 2025.

According to table 1's descriptive statistical analysis, the digital transformation variable has a mean of 1.9375, a standard deviation of 0.86190, a minimum value of 1.00, and a maximum value of 3.00. The ESG variable has a mean of 1.5625, a standard deviation of 1.12333, a minimum value of 0.00, and a maximum value of 3.00. SIZE, which measures company size, has a mean of 29.4856, a standard deviation of 0.64723, a minimum value of 27.71, and a maximum value of 31.14. ROA, a metric used to measure financial performance, has a mean of 0.0709, a standard deviation of 0.01371, a minimum of 0.05, and a maximum of 0.12.

Normality Test

Table 2 shows that the Kolmogorov-Smirnov Z value is 0.068 with a significance level of 0.200. This indicates that the research variables are normally distributed, as they are at a significance level of $0.200 > 0.05$. Thus, the variables profitability, leverage, firm size, and firm value are normally distributed.

**Table 2: Normality Test
One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		80
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.01026247
Most Extreme Differences	Absolute	.075

	Positive	.075
	Negative	-.063
Test Statistic		.075
Asymp. Sig. (2-tailed)		.200

a. Test distribution is Normal.

b. Calculated from data.

Source: Data Processed by SPSS, 2025.

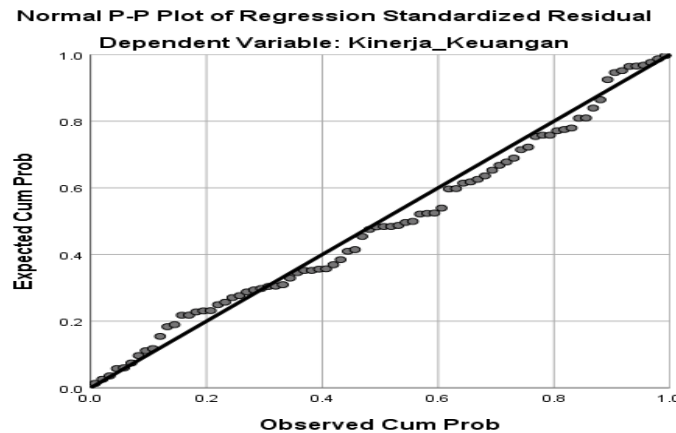


Figure 1: Probability Plot Normality Test Results

Source: Data Processed by SPSS, 2025.

Based on Figure 1, it can be seen that the points are around the diagonal line and follow the direction of the diagonal line, so it can be indicated that the residual data has been normally distributed and has met the assumption of normality.

Multicollinearity Test

According to the test results shown in Table 3 below, the tolerance value is greater than 0.10 and the VIF values for every variable are less than 10. As a result, there are no signs of multicollinearity between the independent variables in the variables of profitability, leverage, company size, and company value.

Table 3: Multicollinearity Test

Coefficients ^a		Collinearity Statistics	
Model		Tolerance	VIF
1	(Constant)		
	Digital Transformation	.971	1.030
	ESG	.978	1.022
	Size	.960	1.042

a. Dependent Variable: Financial Performance

Source: Data Processed by SPSS, 2025.

Heteroscedasticity Test

The scatterplot graph below demonstrates how the points are dispersed both above and below the 0 on the Y axis and are randomly distributed. It can be inferred that the regression model employed in this investigation does not exhibit heteroscedasticity.

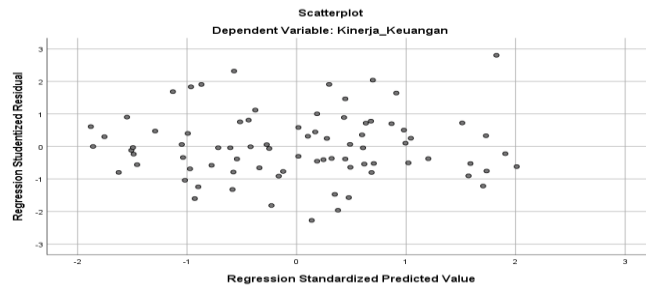


Figure 2: Heteroscedasticity Test

Source: Data Processed by SPSS, 2025.

Autocorrelation Test

Table 4 shows that the assumption of independent residuals has been met, indicating that there is no autocorrelation in the data. This is indicated by the Durbin-Watson value of 1.891, which ranges from -2 to +2. It can be concluded that the regression model in this study is free from autocorrelation.

Table 4: Autocorrelation Test

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.748 ^a	.559	.541	.01282	1.951

a. Predictors: (Constant), Size, ESG, Digital Transformation

b. Dependent Variable: Financial Performance

Source: Data Processed by SPSS, 2025.

Hypothesis Testing Results

Table 5 Table 5's R² value of 0.559 indicates that company size, ESG, and digital transformation all have an impact on financial performance to the tune of 55.9%. Other factors not included in this study have an impact on the remaining 44.1%.

Table 5: Coefficient of Determination Test (R²)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.748 ^a	.559	.541	.01282

a. Predictors: (Constant), Size, ESG, Digital Transformation

b. Dependent Variable: Financial Performance

Source: Data Processed by SPSS, 2025.

The model feasibility test, also known as the ANOVA test, yielded results in Table 6 with an F-value of 19.899 and a significance value of 0.000. As a result, this research model can be used, permitting partial testing. Thus, it can be said that the response/dependent variable is significantly impacted simultaneously by all predictor/independent variables.

Table 6: Model Feasibility Test (F)

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.007	3	.002	19.899	.000 ^b
	Residual	.008	76	.000		
	Total	.015	79			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Size, ESG, Digital Transformation

Source: Data Processed by SPSS, 2025.

This study consistently uses a 95% confidence level. Therefore, the statistical values in Table 7 indicate that the size variable has no significant effect on financial performance. Meanwhile, digital transformation and ESG significantly influence company performance.

Table 7: Multiple Linear Regression Test

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	-.029	.055		.597
	Digital Transformation	.007	.001	.460	.000
	ESG	.005	.001	.438	.000
	Size	.003	.002	.124	.160

a. Dependent Variable: Financial Performance

Source: Data Processed by SPSS, 2025.

4.1 Key Findings

The digital transformation variable's analysis yielded a significance value of 0.000 and a coefficient of 5.277. The hypothesis is accepted because this value is less than 0.05. Thus, it can be said that financial performance is positively and significantly impacted by digital transformation.

The Environmental, Social, and Governance (ESG) variable analysis yielded a significance value of 0.000 and a coefficient of 5.042. The hypothesis is accepted because this value is less than 0.05. Thus, it can be said that ESG significantly and favorably affects financial performance.

The size variable analysis yielded a significance value of 0.160 and a coefficient of 1.418. Since this value exceeds 0.05, the hypothesis is disproved. Consequently, it can be said that size has no bearing on financial performance.

4.2 Interpretation of Results

4.2.1 The Impact of Digital Transformation on Financial Performance

The results of the study show that digital transformation has a significant impact on financial performance, meaning that the higher the level of digitalization of a company, the better its financial performance.

Conceptually, this aligns with the Resource-Based View (RBV), which states that unique resources such as digital capabilities can create competitive advantage and improve operational efficiency [20]. Digital transformation enables companies to automate business processes, improve asset management efficiency, and accelerate real-time data-driven decision-making [16].

In the Indonesian context, where digitalization is a national strategy, companies that adapt more quickly to technology tend to have broader market access and more efficient cost structures. This supports the findings of [15], which state that digital transformation can positively impact business model innovation and profitability.

4.2.2 The Influence of Environmental, Social, and Governance (ESG) on Financial Performance

This study also found that ESG (Environmental, Social, and Governance) disclosure significantly impacts financial performance. This suggests that companies that are more transparent and active in sustainability reporting tend to demonstrate stronger financial performance.

ESG disclosure not only reflects social responsibility but also mitigates non-financial risks such as litigation, regulatory sanctions, or consumer boycotts. According to legitimacy theory, companies that build good relationships with the community and stakeholders will gain long-term support, ultimately positively impacting profitability [17].

[18] study also showed that ESG disclosure has a positive correlation with ROA and firm value. Investors tend to place a premium on companies that manage environmental and social risks well. Therefore, ESG disclosure not only provides ethical value but also creates economic value.

4.2.3 The Effect of Size as a Control Variable on Financial Performance

[18] study also showed that ESG disclosure has a positive correlation with ROA and firm value. Investors tend to place a premium on companies that manage environmental and social risks well. Therefore, ESG disclosure not only provides ethical value but also creates economic value.

This can be explained by the characteristics of large companies, which often have complex organizational structures, high levels of bureaucracy, and greater operational burdens, thus reducing asset management efficiency [21] also added that company size does not always reflect the ability to create added value, especially if it is not supported by efficiency and innovation strategies. Therefore, company size cannot be used as the sole predictor of financial performance, and in this study, it was not significant enough to influence financial performance.

5. Discussion

This research contributes to strengthening our understanding of how digital transformation and ESG disclosure can impact the financial performance of companies listed on the Indonesia Stock Exchange. These findings have strategic implications for corporate management and stakeholders in responding to the dynamics of the digital economy and increasing demands for sustainability. The significant results for these two key variables support the view that companies are not only required to pursue asset and revenue growth but also to improve operational quality and non-financial transparency as part of their long-term value strategy.

5.1 Comparison with Prior Research

The results of this study align with the findings of [15], [16], which state that digital transformation positively contributes to company performance, both in terms of operational efficiency and value innovation. This research is also consistent with studies by [17], [18], which show that ESG disclosure increases investor confidence and company reputation, ultimately impacting profitability.

However, not all results are entirely consistent. Several studies, such as found that not all ESG aspects directly impact short-term profits, especially if their implementation is not yet integrated into the company's core strategy. This suggests that the effectiveness of ESG as a performance driver also depends on the sector context, internal governance, and the depth of a company's ESG reporting.

The finding that company size has no significant effect on ROA also aligns with studies by [21] which found that larger companies are not always more efficient or profitable. Thus, this research reinforces the understanding that digital and sustainability strategies are far more important than business scale alone.

5.2 Limitations

Several limitations of this study should be acknowledged. First, the use of secondary data and a quantitative approach based on linear regression cannot capture the dynamics of managerial behavior or qualitative strategies. Second, the measurement of digital transformation and ESG variables is done numerically, thus not reflecting the actual complexity of digitalization strategies or the quality of ESG reporting conducted by each company. Third, the limited five-year timeframe (2020–2024) also risks missing long-term fluctuations or trends.

5.3 Future Research

To enrich the results, future research could adopt a panel data regression approach with fixed or random effects models to more accurately handle the data structure across time and between companies. Furthermore, the measurement of digitalization variables could be expanded, for example, using an information technology adoption index, IT spending intensity, or e-commerce integration.

On the ESG side, it would be beneficial to include an assessment of reporting quality, not just the number of disclosures. Future research is also recommended to consider mediating or moderating variables, such as corporate governance, investment efficiency, or market perception, to further explain the relationship between digital transformation, ESG, and financial performance.

6. Conclusion

Using company size as a control variable, this study attempts to examine how digital transformation and ESG (Environmental, Social, and Governance) disclosure affect Indonesian companies' financial performance. The growing importance of sustainability and digitalization in the age of the digital economy, along with the shortcomings of earlier studies that did not concurrently analyze both aspects in the context of the Indonesian capital market, are the driving forces behind this investigation.

The research hypotheses were tested using secondary data from 16 companies between 2020 and 2024 using a linear regression analysis method. The findings show that financial performance, as

determined by Return on Assets (ROA), is positively and significantly impacted by both digital transformation and ESG disclosure. On the other hand, this model does not demonstrate a significant impact of company size, indicating that operational efficiency and profitability are not necessarily correlated with company size.

The implications of these findings suggest that investment in digital technology and a commitment to sustainability transparency are key factors in building stronger and more sustainable financial performance. This research contributes to the literature by integrating the two strategic issues of digitalization and sustainability into a single empirical analytical framework. Furthermore, these findings provide insights for industry players and policymakers that promoting ESG and adopting digital technology is not only an ethical obligation but also has a tangible impact on a company's economic value.

7. Recommendation

As a means of enhancing sustainable financial performance, businesses are urged to broaden the adoption of digital transformation and raise the caliber of ESG disclosures. In addition to enhancing investor sustainability literacy, regulators like the Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX) ought to fortify laws and incentives pertaining to ESG reporting and issuer digitization. To improve the study's findings, future researchers are encouraged to employ panel data models and take into account extra factors like operational effectiveness or governance quality.

REFERENCES

- [1] L. Li, F. Su, W. Zhang, and J. Y. Mao, 'Digital transformation by SME entrepreneurs: A capability perspective', *Information Systems Journal*, vol. 31, no. 1, pp. 136–164, 2021.
- [2] A. Fatemi, M. Glaum, and S. Kaiser, 'ESG performance and firm value: The moderating role of disclosure', *Global Finance Journal*, vol. 38, pp. 45–64, 2018.
- [3] G. Friede, T. Busch, and A. Bassen, 'ESG and financial performance: Aggregated evidence from more than 2000 empirical studies', *Journal of Sustainable Finance & Investment*, vol. 5, no. 4, pp. 210–233, 2015.
- [4] M. Khan, G. Serafeim, and A. Yoon, 'Corporate sustainability: First evidence on materiality', *The Accounting Review*, vol. 91, no. 6, pp. 1697–1724, 2016.
- [5] D. Y. Tang and Y. Zhang, 'Do shareholders benefit from green bonds?', *Journal of Corporate Finance*, vol. 61, 2020.
- [6] A. Buallay, 'Is sustainability reporting (ESG) associated with performance? ', *Management of Environmental Quality*, vol. 30, no. 1, pp. 98–115, 2019.
- [7] E. R. Ahmed, M. Aamir, and T. T. Y. Alabdullah, 'Does digital transformation improve firm performance? Evidence from emerging markets', *J Bus Res*, vol. 147, pp. 540–551, 2022.
- [8] H. Susanti, A. Wibowo, and M. I. Pratama, 'Digitalisasi dan Dampaknya terhadap Kinerja Perusahaan di Indonesia', *Jurnal Riset Akuntansi dan Keuangan*, vol. 11, no. 1, pp. 45–60, 2023.
- [9] A. Bharadwaj, O. A. El Sawy, P. A. Pavlou, and N. Venkatraman, 'Digital business strategy: Toward a next generation of insights', *MIS Quarterly*, vol. 37, no. 2, pp. 471–482, 2013.
- [10] IDX, 'Daftar Saham Indeks IDX ESG Leaders 2023', Bursa Efek Indonesia.

- [11] M. Yu, H. Luu, and B. Tjahjadi, 'The relationship between firm size and financial performance', *Asian Journal of Business and Accounting*, vol. 13, no. 2, pp. 147–172, 2020.
- [12] R. G. Eccles, I. Ioannou, and G. Serafeim, 'The impact of corporate sustainability on organizational processes and performance', *Manage Sci*, vol. 60, no. 11, pp. 2835–2857, 2014.
- [13] R. Atan, M. M. Alam, J. Said, and M. Zamri, 'The impacts of environmental, social, and governance factors on firm performance: Panel study of Malaysian companies', *Management of Environmental Quality: An International Journal*, vol. 29, no. 2, pp. 182–194, 2018.
- [14] F. Alkaraan, 'Digital transformation and firm performance: Evidence from Saudi Arabia', *Technol Soc*, vol. 67, 2021.
- [15] V. Cillo, R. Rialti, B. Bertoldi, and F. Ciampi, 'Knowledge management and business model innovation in SMEs: The role of digital transformation', *Management Research Review*, vol. 43, no. 2, pp. 228–245, 2020.
- [16] A. Hanelt, R. Bohnsack, D. Marz, and C. Antunes Marante, 'A systematic review of the literature on digital transformation: Insights and implications for strategy and organizational change', *J Bus Res*, vol. 129, pp. 902–913, 2021.
- [17] R. Gunawan and H. B. Santoso, 'Penerapan digital transformation pada UMKM berbasis data menggunakan pendekatan maturity model', *Jurnal Sistem Informasi Bisnis*, vol. 12, no. 2, pp. 102–110, 2022.
- [18] A. R. Putri, M. M. R. Sari, and S. P. Wulandari, 'Pengaruh ESG Disclosure terhadap Nilai Perusahaan pada Perusahaan LQ45', *Jurnal Akuntansi Multiparadigma*, vol. 14, no. 1, pp. 106–122, 2023.
- [19] L. Ardito, S. Raby, G. Albort-Morant, and A. M. Petruzzelli, 'Digital and environmental orientations in SMEs' sustainable innovation', *J Bus Res*, vol. 140, pp. 206–218, 2022.
- [20] J. B. Barney, 'Firm Resources and Sustained Competitive Advantage', *J Manage*, vol. 17, no. 1, pp. 99–120, 1991.
- [21] S. Wahyuni and D. A. Sari, 'Ukuran Perusahaan dan Profitabilitas: Studi Empiris pada Emiten Sektor Energi di BEI', *Jurnal Ekonomi dan Bisnis*, vol. 13, no. 1, pp. 45–53, 2020.